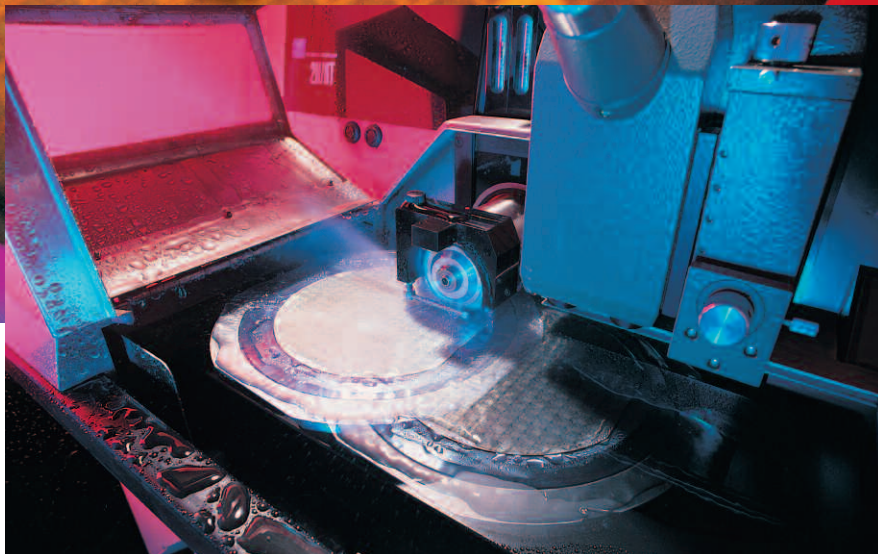
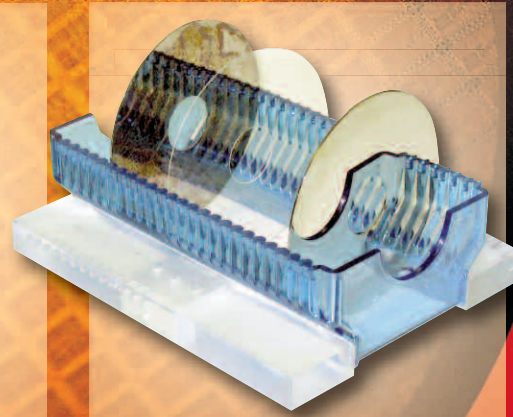


Measurement/Verification/Inspection Solutions for...

Semiconductor, Compound Semiconductor, and High Purity Liquid /Gas Delivery Systems

**Proven
Ultrasonic
Technology**



COSENSE INC

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application guidelines

DISCRETE LIQUID LEVEL SENSORS

LL-01, LL-10, SL-601, SL-630, SL-900, AD-101

- No moving parts eliminate particle generation
- Economical price suitable for OEM usage.
- 316LSS construction
- Electro polish to 10 URA
- Mounting options include NPT, VCR, sanitary fitting
- Miniature size offers minimal liquid displacement
- Up to 8 actuation levels per sensor
- Non-Invasive clamp-on sensor requires no coupling media
- Inline/Integral sensor with pipe/tube prevents contamination to ultra pure solvents
- Available with a variety of input/output configurations
- Bubble detection in coolant line
- Leak detection in double wall/pipe container/sump well
- SL-630 Non-Invasive disposable/reusable clamp-on sensor for plastic bottles

CONTINUOUS LIQUID LEVEL TRANSMITTERS

ML-11, ML-12, SI-700, SL-730

- 316LSS Construction
- Electro polish to 10 URA for high purity solvents, photo resists, specialized chemicals, DI water
- No moving parts eliminate particle generation
- Mounting options include NPT, VCR, sanitary fitting
- Through Liquid Sensor offers minimal liquid displacement; Through Air Sensor no liquid displacement
- Available with a variety of analog outputs (4-20 mA, 0-10V, 0-5V)
- PC compatible RS-232 port
- SL-730 Bottom-Up Transmitter with dry coupled non-invasive sensor

processing applications:

Chemical Delivery Systems Acid and Solvent Tanks

- Monitor level of aqueous chemicals
- Solvent/Photoresist canister level control
- Monitor sulfuric acid in tank
- Deionized water tank level
- Monitor high purity solvents



Wafer Preparation/ Etching Equipment

- Monitor DI water level
- Coolant level/air bubble monitor
- Level control of high purity chemicals



Ion Implant System Cleaning Equipment/Pump Protection Recirculator/Gas Scrubber

- Leak detection
- Coolant level
- Drain line level



Deposition Equipment (CVD/PVD)

- Use on cooling line around deposition chamber
- Monitor coolant tank level
- Monitor TEOS level



sensor selection:

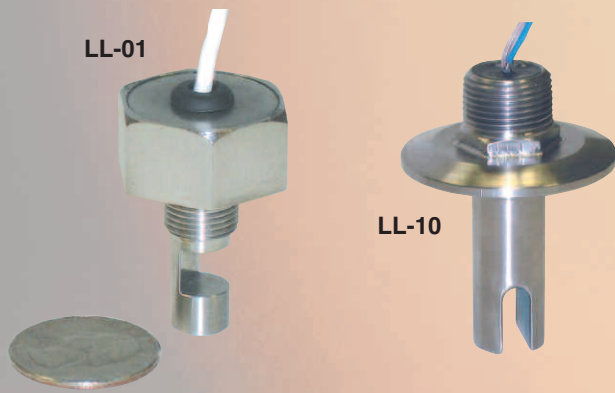
LL-01	Miniature Level Switch
LL-10	Standard Level Switch
SL-601	Non-Invasive Clamp-on Sensor
SL-630	Non-Invasive Disposable /Reusable Level Switch
SL-900	Invasive Tube-In-Tube / Gap Type Multi-Point Switch
SL-700	Level Transmitter - through liquid
SL-730	Bottom-Up Transmitter with dry coupled sensor
ML-11	Level Transmitter - through air
ML-12 / ML-104 / ML-108	Wafer Profile Bow, Warp
AD-101	Air-Bubble Detector

Wafer Profile / Alignment / Flatness / Counting / Position Safety

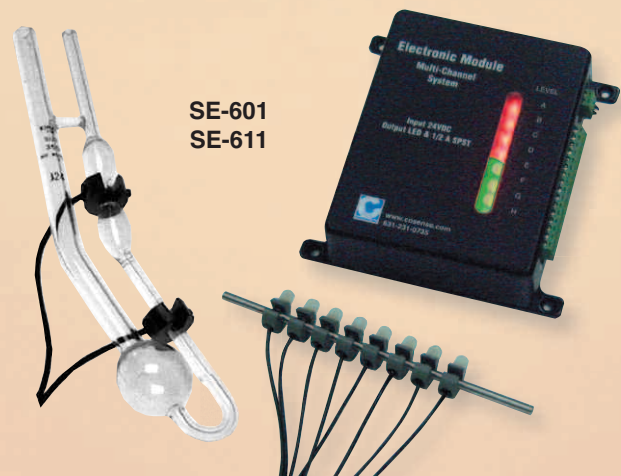
ML-101 Micromasurement Single/Multi Channel RS-232, 4-20 mA, alarm relays, accurate to $\pm 0.0002''$ ($\pm 0.005\text{mm}$)

For application assistance call toll-free at:
1-800-456-9994 or e-mail sales@cosense.com

Switch:



Clamp-on:



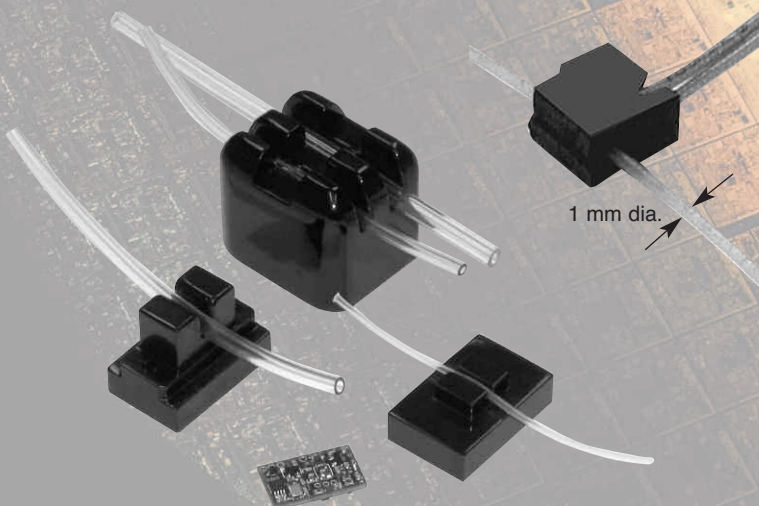
Level Transmitter:



Single & Multiple Point Level:



Air Bubble Detector & Leak Detector:

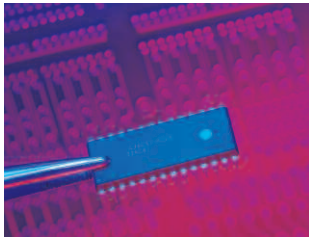
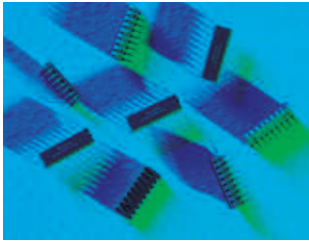


Microm measurement System:

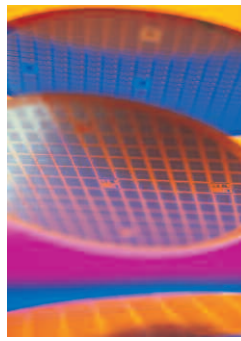
ML-11, ML-12 (Level): Single/Multi Channel
- RS232, 4-20mA, Optical Solid State Relay
Accurate to $\pm 0.0002''$ ($\pm 0.005\text{mm}$)



Micro Chip Making

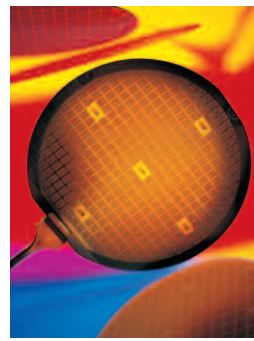


Micro Chip Making



Wafer Manufacturing

Wafer Manufacturing



Wafer Manufacturing

Product/Application Matrix

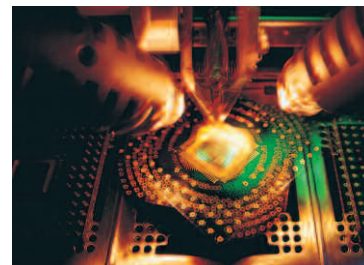
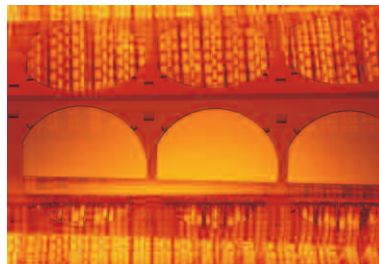
Discre

Process	Application	LL01	LL10	SL-
Chemical delivery systems Acid and solvent tanks	Monitor level of aqueous chemicals	•	•	
	Solvent/Photoresist canister level control	•	•	
	Monitor sulfuric acid in tank	•	•	
	Deionized water tank level	•	•	
	Monitor high purity Solvents	•	•	
Ion implant system cleaning equipment	Leak detection	•		
Pump protection recirculator	Coolant level	•	•	
Gas scrubber	Drain line level	•	•	
CVD/PVD/ALD	Use on cooling line			
	Monitor coolant tank	•	•	
	Monitor TEOS level	•	•	
	DRAM chip-making equipment	•		
Wafer Profile / Bow / Warp	Alignment/ Flatness/counting/Position			
	Thickness, buckling, gripping			
Wafer preparation/Etching Equipment	Monitor DI water level	•	•	
Diffusion Furnaces	Coolant level/Air Bubble Monitor			
	Level control of High Purity chemicals	•	•	
In Plant	Coolant fluid level monitoring	•	•	
	Monitor sulfuric acid in day tanks	•	•	
	Monitor High purity solvents	•	•	

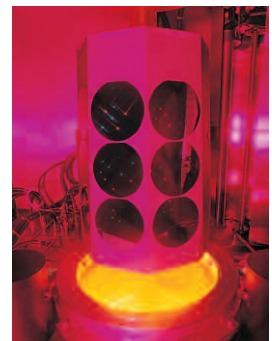


Lab Tech Adjusting Machinery

Wafer Lapping and Polishing



Wafer Probe Test



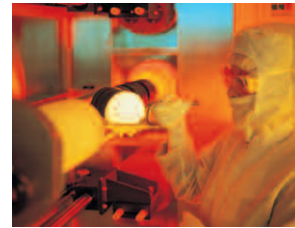
Silicone Wafer Manufacturing

Passivation



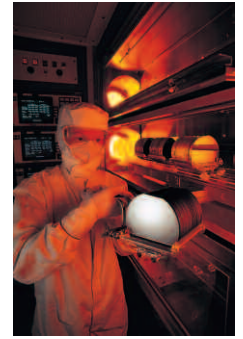
Scientists in Wafer Laboratory

Scientists in Wafer Laboratory



Passivation

Passivation



ete Liquid Level Sensors

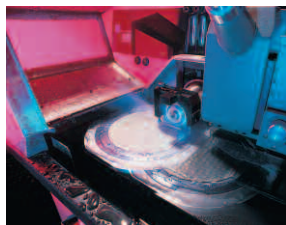
Continuous Transmitters Invasive/Non Invasive

601	SL-900	SL-630	AD-101	SL-700	SL-730	ML-11	ML-01/02/08
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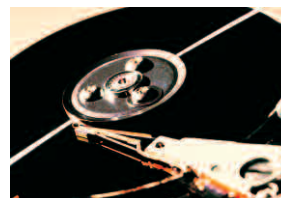
Electronics Manufacturing



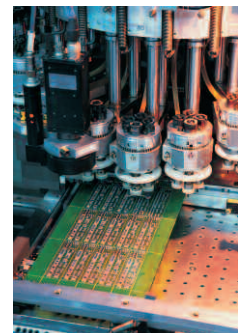
Wafer Cleaning



Chemical Wafer Deposition



Hard Disk Drive



Printed Circuit Board

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- Non-invasive Sonic Eye® - point level

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